

## **REMARKS**

Applicants submit these remarks in response to the Office Action dated August 26, 2005 ("Office Action"). This Response is filed with a one-month Petition for Extension of Time and the applicable fee. In the event that there are any additional fees in connection with the filing of the present papers, please charge any fee due in connection with this submission to Deposit Account No. 23-2415.

Claims 1-27 are pending in the application. Independent Claims 1, 23, 26 and 27 have been amended to recite that each pattern represents a compound selected from a database of compounds. These revisions are supported throughout the specification.

For example, in paragraphs [00039] and [00040] on page 12, Applicants' specification refers to the phrase "input patterns" as follows:

"According to the method of the invention, at least some of all possible pairs of objects (patterns) from a selected plurality of objects are compared, and the resulting pairwise relationships are recorded in a database. As would be apparent to one skilled in the relevant art given the discussion herein, there are a number of approaches that can be taken in accordance with the method of the invention to select objects to be compared.

When applying the method of the invention to the field of molecular similarity, for example, one approach for selecting objects (compounds) is to judiciously select a subset of diverse objects (compounds) that would serve to define a reasonable compound space for similarity/dissimilarity analysis. In an embodiment, a subset of about 100-1000 diverse compounds can be selected for pairwise comparison."

Moreover, paragraph [00044] on page 14 of Applicants' specification provides:

"This second selection approach can be used, for example, in the field of molecular similarity to mine a database of compounds and identify compounds similar to compounds having known therapeutic, agricultural or other commercial value. As described herein, the compounds selected from the database can be multidimensionally scaled to an m-dimensional vector space and used to

determine one or more nonlinear mapping functions. These mapping functions can then be used to map other compounds in the same or a different database to the m-dimensional vector space in order to determine which compounds in the database may be commercially valuable. Compounds having known therapeutic, agricultural or other commercial value can be selected and mapped to the m-dimensional vector space to identify particular areas or regions of importance. New compounds which map to the same area or region of the m-dimensional vector space as the compounds having known commercial or therapeutic value are likely to be similar to the compounds having the known commercial therapeutic, agricultural or other commercial value.”

Accordingly, the amendment to the independent claims is fully supported by the specification and entry thereof is proper and respectfully requested. No new matter is introduced.

Claims 1-27 were rejected under 35 U.S.C 101 as allegedly directed to non-statutory subject matter. While Applicants disagree with the position taken in the Office Action, Applicants have revised the claims to recite that each pattern represents a compound selected from a database of compounds. Accordingly, it is believed that the rejection under 35 U.S.C 101 has been obviated. Withdrawal of the rejections under sections 101 and 112 first paragraph is therefore in order and is respectfully requested.

Claims 1-27 were rejected under 35 U.S.C 102(b) as allegedly anticipated by *Arsalan*, The BP Neural Networks With Data Clustering Enhancement-An emerging Optimization Tool, Proceedings of the 1996 IEEE International Symposium on Intelligent Control, Dearborn, MI, September 15-18, 1996, pp 188-193. This rejection is believed to be obviated by the above amendments. Accordingly, Withdrawal of the rejection is respectfully requested.

### CONCLUSION

In view of the above amendments and remarks, it is believed that claims 1-27 now under consideration in the application are in condition for allowance and such favorable action is earnestly solicited.

If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (858) 350-2337.

A one month-extension of time fee is submitted herewith. It is believed that no additional fees are due in connection with this submission. However, if any fees are required, please charge any fee due to Deposit Account No. 23-2415, Referencing Docket No. 30923-701.201.

Respectfully submitted,

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